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Rosellinia angusta and *R. menglana* spp. nov. and two new *Rosellinia* records from China

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Abstract—Two new species, *Rosellinia angusta* and *R. menglana*, are described, and *R. bonaerensis* and *R. longispora* are recorded as new to China.

Key words—*Ascomycota*, pyrenomycetous fungi, taxonomy, *Xylariaceae*

Introduction

Here we describe two new species of *Rosellinia*, and two new *Rosellinia* records from China. These specimens are conserved in the Herbarium Mycologicum Academiae Sinicae, Beijing, China (HMAS).

Materials & methods

The specimens were examined using a Motic SMZ-168 stereomicroscope. Microscopic features of asci and ascospores were described from slide preparations mounted in water and Melzer's reagent, and measurements were made from 20 ascospores, using a Zeiss Axioskop 2 plus compound microscope. Stromata were photographed using a Sony NEX-7 digital camera.

Taxonomy

Rosellinia angusta Wei Li bis & L. Guo, **sp. nov.** Figs 1–3

Fungal Names FN 570568

Differs from *Rosellinia floridana* by its larger ascospores and usually with narrowly rounded or tapering ends.

Type: China, Yunnan, Puer, Simao, alt. 1260 m, on corticated wood, 18.III.2017, L. Guo 12234 (**Holotype**, HMAS 247749).

Etymology: The epithet refers to the narrowly rounded or tapering ends of the ascospores.

Subiculum felted, brown, evanescent at maturity. Stromata subglobose, solitary to gregarious, dark brown, 700–1000 × 800–1000 µm. Ostioles papillate, black. Ectostroma 60–80 µm thick, black. Entostroma disappearing in old stage. Perithecia subglobose, 600–700 × 700–800 µm. Ascus apical ring bluing in Melzer's iodine reagent, 9–13 µm tall, upper diameter 4–5 µm, lower 4–6 µm. Ascospores asymmetrically ellipsoidal, usually with narrowly rounded or tapering ends, sometimes papillate or broadly rounded, 22–30 × 7–11 µm, dark brown, with straight germ slit as long as spore.

Additional specimens examined: **CHINA**, **Zhejiang**, **Wencheng**, Shimen, alt. 520 m, 22.XI.2016, L. Guo 12027 (HMAS 247757); L. Guo 12037 (HMAS 255301); **Fujian**, **Qinning**, Qingliu, alt. 600 m, 27.VII.1960, Q.Z. Wang & al. 528 (HMAS 29554); **Guizhou**, **Libo**, Maolan, alt. 550 m, 12.IX.2013, W. Li 2417 (HMAS 253043) ; W. Li 2426 (HMAS 253041).

Comments: *Rosellinia angusta* is similar to *R. floridana* L.E. Petrini, which differs in its smaller ascospores (19–26 × 8–10 µm) with broadly rounded ends (Petrini 2013a,b).

Rosellinia menglana Wei Li bis & L. Guo, **sp. nov.** Figs 4–6

Fungal Names FN 570569

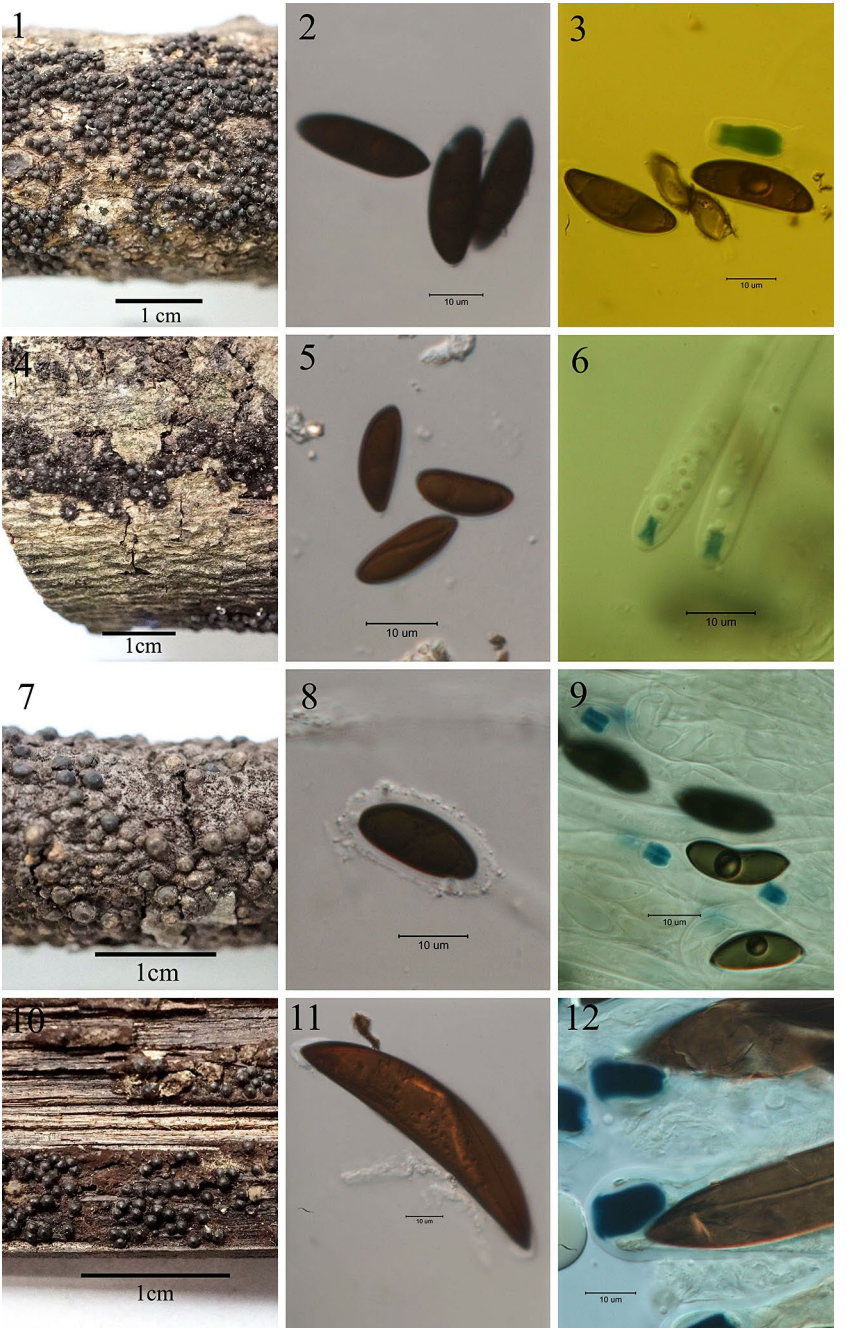
Differs from *Rosellinia sigmoidea* by asymmetrically ellipsoidal ascospores with sigmoid germ slit extending over the whole spore length, and its well developed subiculum.

Type: China, Yunnan, Mengla, alt. 750 m, on wood, 17.X.2013, W. Li 2989 (**Holotype**, HMAS 245216).

Etymology: The epithet refers to the type locality, Mengla.

Subiculum well developed, roughly silky, dark brown, retained at maturity. Stromata solitary to densely gregarious, subglobose, dark brown, 700–900 × 800–1000 µm, almost completely embedded in the subiculum. Ostioles papillate, dark brown. Ectostroma 80–140 µm thick, black. Entostroma white, disappearing in old stage. Perithecia 500–700 × 660–800 µm. Ascus apical ring bluing in Melzer's iodine reagent, 3.5–4 µm high, upper diameter 2.5–3 µm,

Figs 1–12. ***Rosellinia angusta*** (HMAS 247749, holotype). 1. Stromata on wood; 2. Ascospores; 3. Ascospores and ascus apical ring. ***Rosellinia menglana*** (HMAS 245216, holotype). 4. Stromata on wood; 5. Ascospores; 6. Ascus apical rings. ***Rosellinia bonaerensis*** (HMAS 255304). 7. Stromata on wood; 8. Ascospore; 9. Ascospores and ascus apical rings. ***Rosellinia longispora*** (HMAS 26813). 10. Stromata on wood; 11. Ascospore; 12. Ascospores and ascus apical rings.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lower 1.5–3 μm. Ascospores asymmetrically ellipsoidal, with narrowly rounded ends, 13–20 × 5–8 μm, brown, with sigmoid germ slit as long as spore.

Comments: *Rosellinia menglana* is similar to *R. sigmoidea* Q.R. Li & al., which differs in its ellipsoidal ascospores with the germ slit extending the half length of the spore and its sparse subiculum (Li & al. 2015).

Rosellinia bonaerensis Speg.,
Anales Mus. Nac. Hist. Nat. Buenos Aires 6: 258, 1898. Figs 7–9

Subiculum woolly, brown to red-brown, retained at maturity. Stromata solitary to gregarious, subglobose to semiglobose, with flat top and short stipe on base, 900–1300 × 1100–1500 μm, with lower part embedded in the subiculum, dark brown to black. Ostioles papillate, black. Ectostroma 100–120 μm thick, black. Entostroma dark brown, retained at the base at maturity. Perithecia 800–1100 × 900–1200 μm. Ascus apical ring bluing in Melzer's iodine reagent, 5–8 μm tall, diameter 3.5–5 μm above, 3–5 μm below. Ascospores asymmetrically ellipsoidal, 17–23 × 7–9 μm, entirely surrounded by a slimy sheath, with a cellular appendage at one end, 1–2 × 1.5–2 μm, dark brown, with straight germ slit almost as long as spore.

Specimen examined: **China**, **Shandong**, **Zaozhuang**, Bodugu, alt. 250 m, on wood, 22.X.2017, L. Guo 12256 (HMAS 255304).

Comments: Our specimen is morphologically similar to the holotype of *R. bonaerensis,* but their ascus apical rings were slightly taller than those of the holotype (4.5–5.5 μm; Petrini 2013).

Rosellinia longispora Rick, Brotéria Ci. Nat. 1: 189, 1932. Figs 10–12

Subiculum felted, brown to dark brown, retained at maturity. Stromata gregarious or solitary, conical, 500–800 × 600–900 μm, surface smooth, black. Ostioles papillate, black. Ectostroma 80–100 μm thick, black. Entostroma disappearing at maturity. Perithecia subglobose, 700–800 μm high, 800–900 μm diam. Ascus apical ring dark bluing in Melzer's iodine reagent, 12–20 μm tall, diameter 6–10 μm above, 5–10 μm below. Ascospores asymmetrically ellipsoidal, with rounded or pinched ends, 56–97 × 12–20 μm, light brown to dark brown, with slimy sheath at one side and both ends, 1 μm thick, with straight germ slit as long as spore.

Specimen examined: **China**, **Guangxi**, **Wude**, on decayed wood, 21.IX.1956, Z.C. Liang 747 (HMAS 26813).

Comments: Our specimen is morphologically similar to the description of holotype of *R. longispora*, but its subiculum retained at maturity, not

evanescent; and ectostromata were slightly thicker than those of the holotype (25–75 µm; Petrini 2013b).

Discussion

Including the four species reported in this paper, we now recognize 45 *Rosellinia* species in China (Teng 1963; Tai 1979; Ju & Rogers 1990, 1999; Yuan & Zhao 1993; Lu & al. 2000; Liu & al. 2010; Petrini 2013a,b; Li & Guo 2015, 2016, 2018; Li & al. 2015; Su & al. 2016).

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